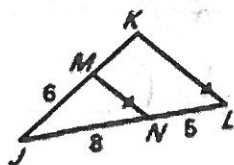


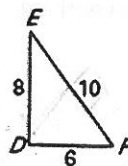
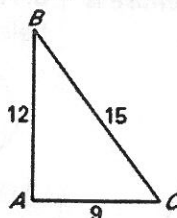
1. Find JK in the figure below.



$$\frac{JM}{MN} = \frac{JN}{NL}$$

$$6 + MN = JK$$

2. How are the triangles similar?



$$\frac{AB}{DE} =$$

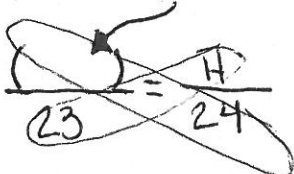
$$\frac{BC}{EF} =$$

$$\frac{AC}{DF} =$$

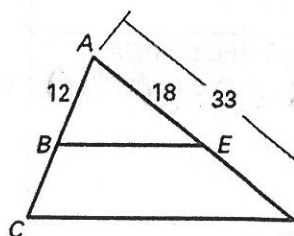
3. You and your friend are standing next to one another outside. Your shadow is 23 inches long and your friend's shadow is 24 inches long. You are 5 feet 5 inches tall. Approximately how tall is your friend, rounded to the nearest tenth? (note: 12 inches = 1 foot)

You:

$$5.5 \times 12 = \text{in.}$$



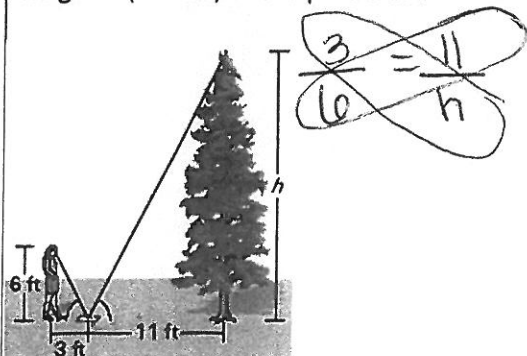
4. BE is parallel to CD. Find the measure of BC.



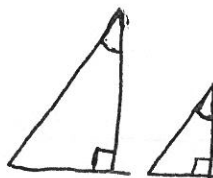
$$\frac{33}{18} = ED$$

$$\frac{AB}{AE} = \frac{BC}{ED}$$

5. In order to estimate the height  $h$  of a tall pine tree, a student places a mirror on the ground and stands where she can see the top of the tree, as shown. The student is 6 feet tall and stands 3 feet from the mirror which is 11 feet from the base of the tree. What is the height  $h$  (in feet) of the pine tree?



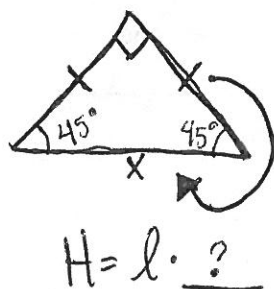
6. If two angles of one triangle are congruent to two angles of another triangle, then the triangles are \_\_\_\_\_.



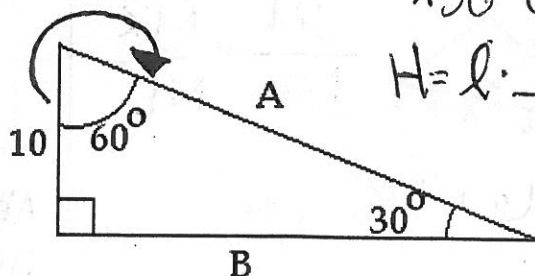
- A. equilateral
  - B. right triangles
  - C. equiangular
  - D. similar
  - E. regular
- 9.4 GC/PPF601

7. In a  $45^\circ-45^\circ-90^\circ$  triangle, the hypotenuse is \_\_\_\_\_ times as long as each leg.

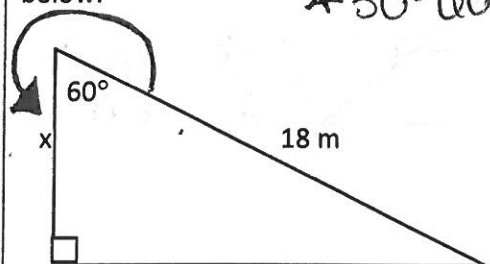
- A.  $\sqrt{3}$
- B.  $\sqrt{2}$
- C.  $\frac{\sqrt{2}}{2}$
- D.  $\frac{3}{2}$
- E.  $\frac{\sqrt{2}}{3}$



8. Find the value of 'A' in the triangle shown below.

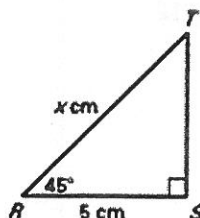


9. Find the length of side x in the triangle below.



- A. 6
- B.  $6\sqrt{3}$
- C. 9
- D.  $9\sqrt{2}$
- E.  $\sqrt{18}$

10. What is the value of x? Round your answer to the nearest tenth.



- A. 3.5
- B. 5.0
- C. 6.4
- D. 7.0
- E. 7.1

\*solve and round!